UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
BULLOCK JR, LEWIS ALEXANDER

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	10/076,166	HUDIS ET AL.
	Examiner	**Art Unit**	
	Lewis A. Bullock, Jr.	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _19 March 2004_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-43_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) _39-43_ is/are allowed.
6) ☒ Claim(s) _1-29,31-36 and 38_ is/are rejected.
7) ☒ Claim(s) _30 and 37_ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
       1. ☐ Certified copies of the priority documents have been received.
       2. ☐ Certified copies of the priority documents have been received in Application No. _____.
       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
          application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1.   The indicated allowability of claim 36 is withdrawn in view of the newly

discovered recitation in reference(s) to Doolan (U.S. Patent 5,764,955). Rejections

based on the newly cited reference(s) follow. However, claims 30 and 37 still indicate

allowable subject matter due to when the response indicates that the reference is

incapable of handling the query the request is simplified and resubmitted to the same

provider for execution.

Allowable Subject Matter

2.   Claims 39-43 are allowed.

3.   Claims 30 and 37 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

4.   The following is a statement of reasons for the indication of allowable subject

matter: The subject matter in the cited claims detail the provider determining from a

received query whether it is capable of handling the current request for information and

sending a response such that if it is not capable of handling the request the request is

simplified and resubmitted to the provider. By allowing the provider to determine

whether the request is complex and sending this indication to the manager so that the

request is simplified and resubmitted, the system dynamically adapts to complement the

capabilities of the components which provide this information and isolates the user from

knowing how to manipulate such components. Hence, a user can efficiently use a

provider such that if the provider can solve a complex query it is performed otherwise

the query is simplified and resubmitted instead of searching for another provider to

perform the query. The prior art of record at best teach the request is initially simplified

based on the capabilities of the provider and the provider sending an acknowledgement

that the command was accepted or rejected (Doolan, U.S. Patent 5,764,955). The

provider of the prior art of record does not have a say as to whether it is capable of

handling the request and sending a response accordingly such that the request is

simplified and resubmitted to the provider. The prior art details that once the provider

rejects the command the entry is removed and an error is returned. Therefore, the

claims are allowable over the prior art of record.

Claim Objections

5. Claim 5 is objected to because of the following informalities: Claim 5 depends

from itself. It is further examined that claim 5 depends from claim 4 and should be

amended as such. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claims 1-20, 23-29, and 31-34 are rejected under 35 U.S.C. 102(e) as being

anticipated by DOOLAN (US 5,764,955).

As to claim 1, DOOLAN teaches in a computing environment, a system for

providing system information (via GET command) to a client (manager), comprising: a

plurality of providers (network element / managed object), each provider corresponding

to a source of system information (col. 9, lines 9-45) and including a provider access

interface (gateway) (col. 11, lines 31-44); a repository (MIB), the repository including

data (management view) that identifies which of the providers (managed resources)

provide system information that a client may request (manager manages the resources

by manipulating the MIB through the agent process) (col. 7, lines 3-19); and a manager

(agent) that isolates the client (manager) from the providers (managed resources /

network elements) (via all access is performed through agent) (col. 11, lines 15-44),

including an access interface (local interface / gateway) that receives a client request

(CMIP request) for system information (col. 16, lines 10-44), the manager (agent)

configured to: access the repository (MIB) to determine a set of at least one provider

(managed resources) that is needed to satisfy the request (CMIP request) (col. 7, lines

7-19); receive a response (acknowledgement) from the at least one provider, the

response indicating whether the provider is capable of handling the client request

(acknowledgement indicates whether command is either accepted or rejected) (col. 21,

lines 16-22); communicate with each provider (network element) in the set via the

provider access interface (gateway) thereof to obtain the system information needed to

satisfy the request (col. 20, lines 8-37; col. 16, lines 10-23); return data (alarm /

response) corresponding to the system information received to satisfy the client request

(col. 20, line 66 – col. 21, line 23; col. 22, lines 23-28; col. 24, lines 51-64).

As to claims 11 and 13, DOOLAN teaches a computer-implemented method,

comprising: receiving a query (CMIP message / mapper message) from a client

(manager) seeking system information, the query including object class information

(instance name of a managed object or network element) (col. 9, lines 9-45, "All

services except the...need to reference managed objects...and its instance name (or

DN)."); isolating the client (manager) from each source (network element / managed

object) of information needed to respond to the query (via all access is performed

through agent) (col. 11, lines 15-44), including: locating a class (MapperMessage /

Dictionary) corresponding to the object class information (instance name / instance

type); decomposing the query into properties of the class (via the MapperMessage

having a ManagedElementID), and, for each property: determining if the property has a

property value therefor stored in a static source (MIB) or if the property value is

obtainable through a provider (network element), and if the property value is stored in a

static source, retrieving the value from that source (via the agent), and if the property

value is obtainable through a provider (network element), receiving a response

(acknowledgement) from the provider indicating that the provider is capable of handling

the client request (acknowledgement indicates whether command is either accepted or

rejected) (col. 21, lines 16-22); and communicating with that provider to obtain the value

(col. 19, lines 43-58; col. 20, line 14-37; col. 7, lines 7-19), placing the property values

into a result set (response), and returning the result set (response) to the client (col. 20, line 66 – col. 21, line 10; col. 24, lines 62-64; col. 7, lines 3-6).

As to claims 14 and 27, DOOLAN teaches a computer-implemented method, comprising: receiving a request (CMIP message) for system information from a client (manager); and isolating the client (manager) from each source (network element / managed object) of the system information (via all access is performed through agent) (col. 11, lines 15-44); including: determining that the request for system information corresponds to a plurality of sources (network elements) of system information (col. 11, lines 31-44; col. 9, lines 9-45); communicating with each of the plurality of sources (network elements) of system information to receive indication (acknowledgment) that a provider is capable of handling the request (acknowledgement indicates whether command is either accepted or rejected) (col. 21, lines 16-22) and to obtain data (via GET command) corresponding to the information requested (col. 9, lines 9-45); aggregating the data (response) into aggregated system information (response / terminating response) that satisfies the request; and providing the aggregated system information to the client in response to the request (col. 20, line 66 – col. 21, line 10; col. 24, lines 62-64; col. 7, lines 3-6; col. 9, lines 9-45).

As to claims 28 and 31, DOOLAN teaches a computer-implemented method, comprising: receiving a query (CMIP message) from a client (manager) requesting system information (via GET command) of a set of at least one managed system device

(managed object) (col. 9, lines 9-45); and satisfying the query while isolating the client

(manager) from the system devices (managed objects / network elements) (via all

access is performed through agent) (col. 11, lines 15-44), including: communicating with

a provider (network element / managed object) to receive a response

(acknowledgement) from the provider indicating that the provider is capable of handling

the query (acknowledgement indicates whether command is either accepted or

rejected) (col. 21, lines 16-22) and to receive data corresponding to the query (col. 19,

lines 43-58), the data including additional information (alarms) with respect to the query;

removing the additional information in the data (subset of alarms are received); and

returning a response to the client (manager) corresponding to the data with the

additional information removed therefrom (alarms) (col. 22, lines 16-39; col. 12, lines

26-32).

As to claims 32 and 34, DOOLAN teaches a computer-implemented method,

comprising: receiving a client query (CMIP message) for requested information (via

GET command) (col. 9, lines 9-45); communicating the query to at least one source

(network element / managed object) of data on behalf of the client (manager) (via agent)

such that the client (manager) is isolated from each source of the data (network element

/ managed object) (via all access is performed through agent) (col. 11, lines 15-44);

receiving data from each source (network element / managed object) (via result) (col.

20, line 66 – col. 21, line 22); and verifying that the data received from the at least one

source indicates that the source is capable of handling the client query

(acknowledgement indicates whether command is either accepted or rejected) (col. 21, lines 16-22) and corresponds to the query (has the same CMIP reference number) (col. 21, lines 1-10, lines 27-49; col. 12, lines 21-26), and if so, returning the data as requested information in response to the client query (all responses received therefore translate message to CMIP and return to mapper) (col. 21, lines 1-49; col. 22, lines 23-28; col. 24, lines 51-64), and if not, adjusting (filtering) the data so as to correspond to the query (col. 22, lines 16-39).

As to claim 2, DOOLAN teaches the manager (agent) communicates with a plurality of providers (network elements) corresponding to a plurality of sources of the system information, and wherein at least one of the sources communicates via a protocol (CMIP) that is different from a protocol of at least one other of the sources (legacy syntax) (col. 11, lines 15-44; col. 12, lines 2-12).

As to claim 3, DOOLAN teaches the data (response / result) returned to the client is provided in an instance of an object (via mapper message) (col. 16, lines 10 – col. 17, line 35).

As to claim 4, DOOLAN teaches the manager (agent) receives data from at least two of the providers (network elements) and aggregates the data into an aggregate response to the client request (col. 21, lines 1-10; col. 24, lines 51-64).

As to claim 5, DOOLAN teaches some of the data is dynamic data obtained by one of the providers (network elements) (via GET command) (col. 24, lines 12-45).

As to claim 6, DOOLAN teaches some of the data comprises static data (static value) obtained by the manager (agent) (col. 19, lines 43-58).

As to claim 7, DOOLAN teaches at least some of the data (static value) comprises static data (static value) obtained by the manager (agent), and wherein the manager (agent) communicates with the repository (local MIB) to obtain the static data (col. 19, lines 43-58).

As to claim 8, DOOLAN teaches the manager (agent) includes a filtering mechanism (IAF) for filtering selected data received from at least one of the providers (network elements) (col. 22, lines 16-39; col. 12, lines 26-32).

As to claim 9, DOOLAN teaches the client request (CMIP request) comprises a single query, and wherein the manager (agent) separates the client request into a plurality of separate requests (TL1 requests), and for each separate request, accesses the repository (MIB) to determine whether a provider (network element) is needed to satisfy the separate request, and if so, to communicate with that provider (network element) to obtain the requested system information (via one to many mapping) (col. 19, line 59 – col. 20, line 37; col. 11, lines 31-44).

As to claim 10, DOOLAN teaches at least one of the separate requests corresponds to static data (static value) maintained in the repository (col. 19, lines 43-58).

As to claim 12, DOOLAN teaches wherein placing the property values into a result set comprises, writing property data into an object instance (MapperMessage) (col. 16, line 10 – col. 17, line 35).

As to claim 15, DOOLAN teaches aggregating the data (col. 21, lines 1-10; col. 24, lines 62-64) and the response is contained in a data structure (MapperMessage) (col. 16, line 10 – col. 17, line 35).

As to claim 16, DOOLAN teaches filtering selected data (alarms) received from at least one of the sources of system information (col. 22, lines 16-39; col. 12, lines 26-32).

As to claim 17, DOOLAN teaches receiving extra information (alarms) from a source of system information that is extra relative to the system information that the client has requested, and filtering the extra information such that the system information returned to the client corresponds to the request (subset of alarms of interest to the manager are received) (col. 22, lines 16-39; col. 12, lines 26-32).

As to claim 18, DOOLAN teaches at least one of the sources of system information provides system information that is static (static value), and at least one other of the sources provides system information that is dynamic (via GET call) (col. 19, lines 43-58).

As to claim 19, DOOLAN teaches the request for system information comprises a complex query (CMIP request), and reducing the complexity of the complex query into a simplified query (TL1 request) (via mapping) (col. 19, line 59 – col. 20, line 37; col. 11, lines 31-44).

As to claim 20, DOOLAN teaches a superset of data (alarms) is received from at least one source of system information in response to the simplified query (TL1 request), and filtering the superset of data into a set of data (subset of data) that satisfies the complex query (subset of alarms of interest to the manager are received) (col. 22, lines 16-39; col. 12, lines 26-32).

As to claim 23, DOOLAN teaches the data from one source of system information (response to a first command) includes information indicating that at least one data property should be obtained from another source of system information (used to send a second command) (col. 20, lines 14-37).

As to claims 24 and 25, DOOLAN teaches the source of system information is a static provider (MIB) or a dynamic provider (network element) and that commands are sent to the providers for data (col. 19, lines 43-58; col. 20, lines 14-37). Therefore, it is inherent that the second command is to either one.

As to claim 26, DOOLAN teaches the sources of system information are represented by objects (managed objects) (col. 7, lines 20-33), and wherein an association object (agent process) provides an association between at least two of the objects (managed objects) representing respective sources of system information (via controlling the managed objects) (col. 7, lines 2-19).

As to claim 29, DOOLAN teaches communicating with at least one other provider (network element / managed object) to receive other data corresponding to the query, and aggregating the data received from each provider (col. 21, lines 1-10; col. 24, lines 51-64).

As to claim 33, DOOLAN teaches the data (alarms) received from the at least one source does not correspond to the query, and wherein adjusting the data comprises filtering the data (via IAF) (col. 22, lines 16-39; col. 12, lines 26-32)

As to claims 35, 36, and 38, DOOLAN teaches a computer-implemented method comprising: receiving a client query (CMIP request); determining a capability level of a

provider of information for satisfying the query based on a response (acknowledgement) from the provider (managed resources / network elements) wherein determining the capability level includes providing the client query (CMIP request) to the provider and evaluating a response (acknowledgement) from the provider (acknowledgement indicates whether command is either accepted or rejected) (col. 21, lines 16-22); providing a request for information (CMIP request) to the source (managed resources / network elements) based on the capability level thereof (acknowledgment); receiving data (response / alarm) from the at least one source; and returning information (alarm / response) corresponding to the data in response to the client query (col. 20, line 66 – col. 21, line 23; col. 22, lines 23-28; col. 24, lines 51-64).

8.   Claims 35 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by "Information Brokering in an Agent Architecture" by MARTIN et al.

        As to claims 35 and 38, MARTIN teaches a computer implemented method, comprising: receiving a client query (pg. 7, "The Broker accepts requests (queries) from either a direct query interface or a service-providing (helper) agent…"); determining a capability level (schema mapping rules) of a provider (source agent) of information for satisfying the query based on a response from the provider (pg. 8, "When an information source agent comes online, it **registers its presence with the Broker…the source agent passes to the Broker a set of schema mapping rules**, which contain the knowledge that is needed by the Broker…"); providing a request (subqueries) for information to the source (source agents) based on the capability level thereof (pg. 7,

"The Broker delegates, translate, and relays the appropriate subqueries to the available

source agents..."); receiving data (results) from the at least one source (source agents);

and returning information corresponding to the data in response to the client query (pg.

7, "...and then accepts the results and reintegrates them for return to the requestor.").

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over DOOLAN (US 5,764,955) in view of BRANDT (US 5,875,327).

As to claim 21, BRANDT teaches at least two of the sources of system

information provide conflicting data, and resolving the conflicting data (col. 2, line 57 –

col. 3, line 5; col. 7, lines 1-9). It would be obvious that since both teachings handle the

client receiving data from multiple sources (preference files / managed objects and MIB)

that the teaching of BRANDT would allow one to filter such information by resolving

against conflicting data, when combined in the management system of DOOLAN.

Therefore, it would be obvious to combine the teachings of DOOLAN with the teachings

of BRANDT, in order to facilitate the downloading and resolving of conflicting

information (col. 2, line 58 – col. 3, line 19).

As to claim 22, BRANDT teaches the sources of system information are represented by hierarchically-arranged objects, and wherein resolving the conflicting data includes selecting data based on the hierarchy of the objects (col. 3, lines 1-5; col. 7, lines 1-9).
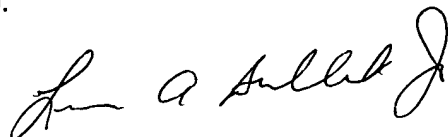
Response to Arguments

11.   Applicant's arguments filed 3/19/04 have been fully considered but they are not persuasive. Applicants sole argument is that the teaching of Doolan does not teach receiving a response from the provider indicating whether the provider is capable of handling the client request as detailed through out the rejected claims. The examiner disagrees. The examiner refers to column 21, lines 16-23 of Doolan which detail that if an acknowledgement is received in response to a command it is analyzed to determine if the command was accepted or rejected. Therefore, Doolan does teach receiving a response from the provider indicating whether the provider is capable of handling the client request, i.e if the command was accepted or rejected. It is acknowledge that the response does not perform as Applicant intended, i.e. wherein the response indicates whether the query should be simplified or not to be resubmitted to the provider, however the prior art does meet the limitation in the broadest possible interpretation of the claims, i.e. that a response indicating that the provider is capable of handling the query is received. See claim 37 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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